

Application No. 09/909,288
Amendment Date January 5, 2005
Reply to Official Action (Paper No. 14) of October 5, 2004

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of the Claims:

1 – 29. (Previously Canceled)

30. (Previously Withdrawn) A method of removing cooked-, baked- or burnt-on soils from cookware and tableware comprising treating the cookware/tableware with a hard surface cleaning composition according to Claim 1.

31. (Previously Withdrawn) A method of removing cooked-, baked- or burnt-on polymerized grease soils from metallic cookware and tableware comprising treating the cookware/tableware with a hard surface cleaning composition according to Claim 1.

32. (Previously Withdrawn) A method of removing cooked-, baked- or burnt-on carbohydrate soils from metallic cookware and tableware comprising treating the cookware/tableware with a hard surface cleaning composition according to Claim 1.

33. (Previously Withdrawn) A method according to Claim 30 comprising the step of pre-treating the cookware/tableware with the hard surface cleaning composition prior to manual or automatic dishwashing.

34. (Previously Withdrawn) A method according to Claim 30 comprising the step of pre-treating the cookware/tableware with the hard surface cleaning composition and covering the pre-treated cookware/tableware with the hard surface cleaning composition and covering the pre-treated cookware/tableware with cling film for a time sufficient to promote swelling of the soil prior to manual or automatic dishwashing.

35. (Previously Withdrawn) A method of removing cooked-, baked- or burnt-on soils from cookware and tableware comprising pretreating the soiled cookware/tableware with a shear thinning hard surface cleaning composition comprising a soil swelling agent and thereafter washing the cookware/tableware in an automatic dishwashing machine.

36. (Previously Canceled)

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37. (Previously Canceled)

38. (Currently Amended) A hard-surface cleaning composition for removing cooked-, baked-, or burnt-on food soil from cookware and tableware, the composition comprising a soil swelling agent and a thickening system comprising a synthetic smectite type clay thickening agent having an average platelet size of less than about 100 nm, wherein the composition has a pH, as measured in a 10% solution in distilled water, from ~~greater than~~ about 11.5 to about 14; and wherein the composition having shear thinning properties.

39. (Previously presented) The composition according to Claim 38, wherein the thickening system further comprises a natural gum.

40. (Previously presented) The composition according to Claim 38, wherein the composition, when sprayed on a vertical stainless steel surface, has a flow velocity less than about 1 cm/s.

41. (Canceled).

42. (Previously presented) The composition according to Claim 38, wherein the composition has a viscosity greater than about 1 Pa s at 6 rpm, lower than about 2 Pa s at 30 rpm, and lower than about 1 Pa s at 60 rpm, measured with a Brookfield cylinder viscometer (model LVDII) using 10 ml sample, and a S-31 spindle.

43. (Previously presented) The composition according to Claim 38, wherein the composition has a reserve alkalinity of less than about 5.

44. (Previously presented) The composition according to Claim 38, further comprising from about 0.05 to about 10% of surfactant selected from the group consisting of anionic surfactants, amphoteric surfactants, zwitterionic surfactants, non-ionic surfactants, semi-polar surfactants, and mixtures thereof.

45. (Previously presented) The composition according to Claim 38, wherein the composition displays an advancing contact angle on a polymerized grease-coated glass substrate at 25°C of less than about 20°.

46. (Previously presented) The composition according to Claim 38, wherein the composition has a soil swelling index of at least about 100%.

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47. (Previously presented) The composition according to Claim 38 further comprising a spreading auxiliary selected from the group consisting of organic solvent components, wetting agents, and mixtures thereof.
48. (Previously presented) The composition according to Claim 47, wherein the spreading auxiliary has a liquid surface tension of less than about 30 mN/m.
49. (Previously presented) The composition according to Claim 47, wherein the spreading auxiliary comprises one or more organic solvent components selected from the group consisting of alcoholic solvents, glycols, glycol derivatives, and mixtures thereof.
50. (Previously presented) The composition according to Claim 47, wherein the spreading auxiliary comprises a mixture of a fully water-miscible organic solvent and a coupling organic solvent having limited miscibility in water and wherein the ratio of water-miscible organic solvent to coupling organic solvent is in the range from about 4:1 to about 1:20.
51. (Previously presented) The composition according to Claim 47, wherein the spreading auxiliary comprises a wetting agent having a liquid surface tension of less than about 30 mN/m.
52. (Previously presented) The composition according to Claim 47, wherein the spreading auxiliary comprises an amine oxide wetting agent.
53. (Previously presented) The composition according to Claim 38, wherein the soil swelling agent is an organoamine solvent selected from the group consisting of alkanolamines, alkylamines, alkyleneamines, and mixtures thereof.
54. (Previously presented) The composition according to Claim 38, wherein the composition has a polymerized grease removal index of at least 25%.
55. (Previously presented) The composition according to Claim 38, wherein the composition is in the form of a dishwashing pretreatment composition.
56. (Previously presented) The composition according to Claim 38 additionally comprising a salt having a divalent cation.

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57. (Currently Amended) A hard surface cleaning product comprising the hard surface cleaning composition of Claim 38 and a spray dispenser, wherein spray droplets from the spray dispenser have an average equivalent geometric diameter from about 3 μm to about 10 μm , as measured using a TSI Aerosizer; wherein the product comprising an organic solvent system and a synthetic smectite type clay thickening agent having an average platelet size of less than about 100 nm, wherein the organic solvent system comprises at least one solvent component acting as a soil swelling agent; wherein the product has a pH, as measured in a 10% solution in distilled water, from about 11.5 to about 14; and wherein said product having shear thinning properties.

58. (Previously presented) The composition according to Claim 38, wherein the thickening system further comprises a viscoelastic, thixotropic thickening agent.

59. (Currently Amended) A hard-surface cleaning composition for removing cooked-, baked-, or burnt-on food soil from cookware and tableware, the composition comprising an organic solvent system and a synthetic smectite type clay thickening agent having an average platelet size of less than about 100 nm, wherein the organic solvent system comprises at least one solvent component acting as a soil swelling agent, ~~and~~ wherein the composition has a pH, as measured in a 10% solution in distilled water, from ~~greater than about 11.5~~ to about 14; and wherein said composition having shear thinning properties.

60. (Previously presented) The composition according to Claim 59, wherein the organic solvent system is selected from the group consisting of alcohols, amines, esters, glycol ethers, glycols, terpenes, and mixtures thereof, and includes at least one organoamine solvent component.

61. (Previously presented) The composition according to Claim 59, wherein the organic solvent system is selected from the group consisting of organoamine solvents, inclusive of alkanolamines, alkylamines, alkylencamines, and mixtures thereof; alcoholic solvents, inclusive of aromatic, aliphatic and cycloaliphatic alcohols, and mixtures thereof; glycols and glycol derivatives, inclusive of C₂-C₃ (poly)alkylene glycols, glycol ethers, glycol esters, and mixtures thereof; and mixtures selected from organoamine solvents, alcoholic solvents, glycols and glycol derivatives.

62. (Previously presented) The composition according to Claim 59, wherein the organic solvent comprises an organoamine solvent and a glycol ether solvent, wherein the glycol ether solvent is selected from the group consisting of ethylene glycol monobutyl ether, diethylene glycol monobutyl ether, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, diethylene glycol monomethyl ether, diethylene glycol monoethyl ether, propylene glycol monobutyl ether, dipropylene glycol monobutyl ether, ethylene glycol phenyl ether, and mixtures thereof.

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63. (Previously presented) The composition according to Claim 62, wherein the glycol ether solvent is a mixture of diethylene glycol monobutyl ether and propylene glycol butyl ether.

64. (Previously presented) The composition according to Claim 59, wherein the organic solvent system has a volatile organic content of less than about 50% at about 1 mm Hg.

65. (Previously presented) The composition according to Claim 59, wherein the organic solvent system is essentially free of solvent components having: a boiling point below about 150°C, a flash point below about 50°C, or a vapor pressure above about 1 mm Hg.

66. (Currently Amended) A hard-surface cleaning composition for removing cooked-, baked-, or burnt-on food soil from cookware and tableware, the composition comprising a soil swelling agent and a shear thinning thickening system whereby the composition has a viscosity greater than about 1 Pa s at 6 rpm, lower than about 2 Pa s at 30 rpm, and lower than about 1 Pa s at 60 rpm, measured with a Brookfield cylinder viscometer (model LVDII) using 10 ml sample, and a S-31 spindle; wherein the composition, when sprayed on a vertical stainless steel surface, has a flow velocity less than about 1 cm/s, ~~and~~ wherein the composition has a pH, as measured in a 10% solution in distilled water, from ~~greater than~~ about 11.5 to about 14; and wherein said composition having shear thinning properties.